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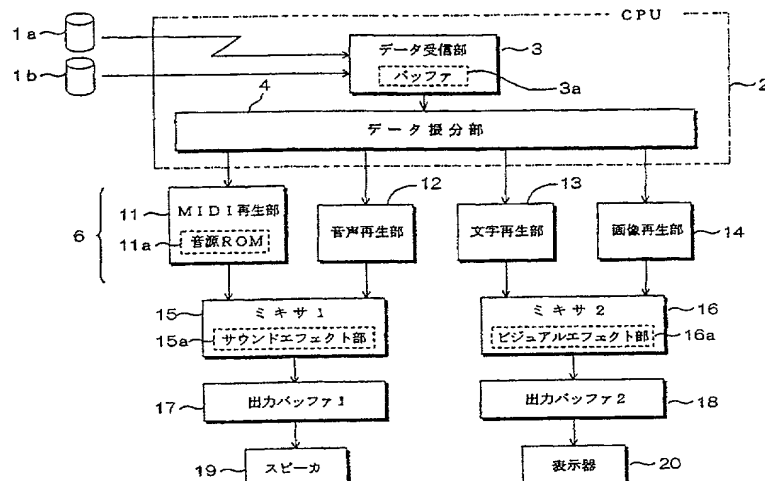
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(54) Title: DATA REPRODUCING DEVICE, DATA REPRODUCING METHOD, AND INFORMATION TERMINAL

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(57) Abstract

Data on MIDI, audio, text and image received by a data receiving unit (3) are data in the SMF format including event information and delta time for executing an event. A data sorting unit (4) sorts the received data according to the kind on the basis of the delta times of the data. The sorted data is reproduced by an MIDI reproducing unit (11), an audio reproducing unit (12), a text reproducing unit (13) and an image reproducing unit (14). The data reproduced by the MIDI reproducing unit and the audio reproducing unit is mixed by a mixer (15) and outputted as sound from a loudspeaker (19), and the data reproduced by the text reproducing unit and the image reproducing unit is mixed by a mixer (16) and displayed as visible information on a display unit (20). The data is reproduced at timings according to the delta times, so that the data of different kinds such as audio and video can be easily synchronized.



3...DATA RECEIVING UNIT
3a...BUFFER
4...DATA SORTING UNIT
11...MIDI REPRODUCING UNIT
11a...SOUND SOURCE ROM
12...AUDIO REPRODUCING UNIT
13...TEXT REPRODUCING UNIT
14...IMAGE REPRODUCING UNIT

15...MIXER 1
15a...SOUND EFFECT UNIT
16...MIXER 2
16a...VISUAL EFFECT UNIT
17...OUTPUT BUFFER 1
18...OUTPUT BUFFER 2
19...LOUDSPEAKER
20...DISPLAY UNIT

ABSTRACT

Each data in MIDI, audio, text and images to be received in a data receiving section (3) is SMF-formatted data including event information and event-executing delta time. A data assorting section 4 assorts data on a kind-by-kind basis depending upon a delta time of each of received data. The assorted ones of data are respectively reproduced in a MIDI reproducing section (11), an audio reproducing section (12), a text reproducing section (13) and an image reproducing section (14). The data reproduced in the MIDI reproducing section and audio reproducing section is mixed in a mixer (15) and outputted as sound from a speaker (19), while the data reproduced in the text reproducing section and image reproducing section is mixed in a mixer (16) and displayed as visible information on a display (20). Because each of data is reproduced in the timing according to the delta time, synchronization can be easily provided between different kinds of data, as sound and images.

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